

To : futuresystemoperator@beis.gov.uk and SOreview@ofgem.gov.uk

28th September 2021

Dear Future System Operator Teams,

Consultation on Energy Future System Operator

EDF is the UK's largest producer of low carbon electricity. EDF operates low carbon nuclear power stations and is building the first of a new generation of nuclear plants. EDF also has a large and growing portfolio of renewables, including onshore, offshore wind and solar generation, and energy storage. With around five million electricity and gas customer accounts, including residential and business users, EDF aims to help Britain achieve net zero by building a smarter energy future that will support delivery of net zero carbon emissions, including through digital innovations and new customer offerings that encourage the transition to low carbon electric transport and heating.

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EDF welcomes this consultation and supports the creation of the Future System Operator (FSO). The enhanced capability of this new entity will strongly support progress towards a net zero energy system over this coming decade. This will be achieved by being able to take a longer-term, holistic assessment of the overall system needs and by providing critical strategic advice to policy makers.

In doing so, it is important that the FSO is not encumbered by private ownership and we support a public body model which is independent from government but operates within a framework that is supported by a designated Strategy and Policy Statement.

Finally, the transition to an FSO is critical and should not be underestimated. An early in-principle decision from government is needed to provide certainty to the ESO, National Grid, industry and more widely investors and then a clear transition plan is needed to confirm initial scope, expectations and resources as the FSO is established. It will be important to secure early benefits from adopting the FSO model recognising that full implementation is likely to take several years.

We have copied the response form below, and answer each of your consultation questions. If you have any questions, please contact me, or Natasha Ranatunga on 07875 112 981.

Yours sincerely



Mark Cox, Head of Nuclear & Wholesale Policy and Regulation

Personal / Confidential information

Please be aware that we intend to publish a summary of all responses to this consultation.

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

Ofgem will publish non-confidential responses (or parts of response) on its website. If you want your response in whole or in part to be considered confidential, please tell us in your response and say why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

Please be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our privacy policy.

All responses will be processed by BEIS and Ofgem as this is a joint consultation.

We will summarise all responses and publish this summary on GOV.UK. The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

I want my response to be treated as confidential ☐

Comments:

About You

Name: Mark Cox

Organisation EDF

| | Respondent type |
|-------------------------------------|---|
| <input type="checkbox"/> | Business representative organisation/trade body |
| <input type="checkbox"/> | Central government |
| <input type="checkbox"/> | Charity or social enterprise |
| <input type="checkbox"/> | Individual |
| <input checked="" type="checkbox"/> | Large business (over 250 staff) |
| <input type="checkbox"/> | Legal representative |
| <input type="checkbox"/> | Local government |

| | |
|----------------------------|-----------------------------------|
| | Respondent type |
| <input type="checkbox"/> | Medium business (50 to 250 staff) |
| 7 <input type="checkbox"/> | Micro business (up to 9 staff) |
| <input type="checkbox"/> | Small business (10 to 49 staff) |
| <input type="checkbox"/> | Trade union or staff association |
| <input type="checkbox"/> | Other (please describe) |

Questions

Chapter 2

Questions in this section relate to

- The case for change

Question 1

Do you agree that net zero will create the need for new technical roles in the electricity and gas systems, and require a new approach to for energy system governance?

A ☒ Yes ☐ No

We agree that net zero requires a step-change in whole system coordination and planning to ensure that the transition is timely and cost efficient.

The scale of change is significant with the electricity power sector needing to decarbonise at pace over the coming decade and grow rapidly to enable decarbonisation of other sectors such as domestic heating, transport, and a range of commercial and industrial processes.

This will require a detailed understanding of the electricity system, a focus on how it needs to change to meet these requirements and an understanding of how the other energy vectors will interact.

Question 2

Do you agree that the establishment of a Future System Operator is needed to fulfil the kinds of technical roles needed to drive net zero?

A ☒ Yes ☐ No

Yes, we support the establishment of a Future System Operator. A clear, expert, independent body accountable for the medium/longer term planning and coordination will support the transition to net zero.

Question 3

Do you agree that a Future System Operator should have roles in both the electricity and gas systems?

A ☒ Yes ☐ No

Yes, we agree that a Future System Operator should have roles in both the electricity and gas systems. It will enable the Future System Operator to realise greater coordination and strategic alignment across the electricity and gas systems. We also believe that its remit would include hydrogen.

In order to be fully effective, the Future System Operator needs to be in a position to understand the interactions and effects that different elements of the energy system have on each other. We do not necessary believe that a Future System Operator needs to *operate* the gas system but that these medium-term planning and coordination activities are important.

Question 4

Do you agree that a Future System Operator should be entirely separate from National Grid plc?

A ☒ Yes ☐ No

Yes, we strongly believe that a Future System Operator should be entirely separate from National Grid plc. The current ownership arrangements could prevent a Future System Operator from operating effectively and efficiently, principally in relation to network planning and competition.

National Grid plc does have material interests in interconnectors and in new networks in England and Wales; we agree that the perception of conflicts of interest itself creates inefficiency, even if no actual conflicts are present.

Question 5

What issues are there with existing institutional arrangements in the UK energy system in relation to system-wide decision-making and planning?

Please provide your answer below:

We believe that the existing arrangements lack a clear decisive source of strategic advice and planning for the energy system.

A current example is the clear need for far greater coordination and planning of the networks needed to connect and achieve the Government's ambition of 40GW of offshore wind by 2030. In this case action is being taken through an enhanced ESO role.

Similarly, no one party is responsible for whole system resilience in all time frames and current arrangements and regulation are too short term focussed. Recent challenges that have emerged through the very rapid reduction in inertia and short circuit levels on the system, through increased renewables, have led to system operating risks and much higher costs for consumers.

As we look forward through this decade the pace and scale of change in the energy system will increase and the need for this system-wide assessment and decision making will be even more acute.

Question 6

What examples/case studies are you aware of where net zero delivery in one part of the energy system did not adequately account for cross-system impacts or costs?

Building on the answers to question 5, there is a more general need for an onshore network review (as well as offshore) to ensure that a more strategic assessment of the network requirements are understood. To date there has been too much focus on a year-by-year process through the ESO's Network Options Assessment. The pace and scale of change to decarbonise the power sector and meet carbon budget 6 over this decade means a more strategic approach to network investment is needed and more liberal approach to anticipatory investments. Previous experience such as the case for the West Coast HVDC link which was approved once the need was fully established (and then the investment itself was delivered late) has meant very higher BSUoS costs and higher emissions.

Similarly while the ESO identified issues arising from high growth in renewables, they did not take actions promptly that would have tackled the failing inertia before system risks grew unacceptably and costs and emission for consumers rose.

Question 7

Where should government focus in our efforts to improve systems thinking and coordination across the energy system?

Please provide your answer below:

Establishing an independent Future System Operator with clear accountability for planning and development of the energy system, and ensuring it is resilient as it evolves will improve systems thinking and coordination.

Chapter 3

Questions in this section relate to

- What existing, enhanced and new roles and functions we consider a Future System Operator is well placed to take on to drive the transition to net zero.

Question 8

Do you agree that the FSO should undertake all the existing roles and functions of NGESO?

A ☒ Yes ☐ No

Yes, we believe that it would be appropriate for a Future System Operator to undertake all the existing roles and functions of NGESO. We do not believe there are other parties that are in a position to undertake these roles which continue to remain necessary. Using the ESO as the core organisation and foundation for the Future System Operator means that it will also be easier to deliver.

Question 9

Do you agree there is a case for the FSO to undertake the gas strategic functions outlined in Option 1?

A ☒ Yes ☐ No

Yes, we agree there is a case for the Future System Operator to undertake the gas strategic functions as outlined in Option 1.

Electricity and gas systems are, and continue to be, key components of the energy system and significant changes expected in both as the system decarbonises. It will be important that a single, independent body understands these interactions and trade-offs to support effective longer-term planning and advice to policy makers.

Question 10

Do you agree that there is not currently a case for the FSO to undertake all GSO roles and functions, including real time gas system operation, as outlined in Option 2?

A ☒ Yes ☐ No

Yes, we agree that real time gas system operation does not need to be undertaken by a Future System Operator, and the case has not been made that it should. In this model, the gas planning function of a

Future System Operator will need to take account of gas system operator views as well as view from the gas and electricity network companies.

Chapter 3- New and enhanced FSO roles

Questions in this section relate to

- 3.2 in the FSO Consultation

Question 11

Do you have views on the proposal for an advisory role? What organisations do you consider would benefit from the provision of advice by the FSO?

Please provide your answer below

There is a need for government to receive independent strategic advice on whole energy system development and resilience, in a way that delivers net zero pathways and aligns with government policy as set out in the Strategic Policy Statement. We agree with the organisations identified as potentially benefitting from the provisional advice by the Future System Operator which include: the UK Government, devolved administrations, Ofgem, or other specified organisations with responsibilities in the energy sector, including the CCC, code managers and potentially local authorities.

Who should bear the costs of providing that advice?

Costs that provide a service that affect every citizen equally must be paid for equitably; it would be better to fund this via taxation given the number of sectors that will benefit from the Future System Operator's advice.

If it needs to be funded from energy consumers, we would not support the additional costs being levied on electricity consumers. Like the current model whereby social and environmental costs are placed upon the cleaner fuel, electricity, and not on gas, this provides entirely the wrong incentives regarding decarbonisation.

Question 12

Do you have any views on the other areas where we are considering new and enhanced roles and functions for the FSO (outlined in section 3.2)?

Please elaborate:

The roles and functions set out in the consultation appear reasonable, including for instance greater coordination with DNOs given the scale of distributed assets. The key is to ensure that the Future System Operator has adequate resources and capability for any new functions. This capability will take time to build in some areas and a clear plan / timeline to support this will be needed.

We do think it best that dispute resolution should remain with the independent economic regulator, Ofgem. This is not a strategic advisory role to meet net zero and therefore is not a valid role for the Future System Operator.

Chapter 4

Questions in this section relate to

Organisation Design

- The high-level characteristics and detailed attributes which we consider are needed to achieve this, and seeks views on two different organisational models and the extent to which they meet these characteristics and attributes.

Question 13

What are your views on our proposed characteristics and attributes of a future system operator and how the organisational models presented would deliver against them?

We agree with the proposed characteristics and attributes. The Future System Operator will undertake new roles for the energy system in strategic planning, holistic thinking and managing systemic/technical risks. It is vital that the technical and operational expertise of the Future System Operator is first class, and that the organisation is resilient. Additional resources will be required compared to today's ESO due to the wider remit in terms of gas and hydrogen system planning advice, and wider strategic advice.

It is vital that the Future System Operator is independently minded and able to act without undue influence from any capital equity holders; it should not have private shareholders, as they may have other undisclosed investment or business interests. Therefore, we favour organisational model 2, a highly independent corporate body model classified within the public sector, but with operational independence from government. We do not favour organisational model 1, a standalone privately-owned model, as we do not feel one could be sure that the capital behind it was genuinely independent of energy sector interests.

Are there other characteristics or attribute that we have not yet considered?

No

Question 14

Are we considering the right organisation models for the FSO? And why?

Please provide your answer below

As explained above we would support an organisational model that is a highly independent corporate body model, classified within the public sector, but with operational independence from government. We do not favour organisational model 1, a standalone privately-owned model, as we do not feel one could be sure that the capital behind it was genuinely independent of energy sector interests.

Question 15

Are we considering the right elements for the FSO's regulatory and accountability frameworks? And why?

Please provide your answer below

The Future System Operator will provide wide-ranging holistic strategic advice independent of Ofgem. For this, it should not be accountable to Ofgem. The Future System Operator should have freedom from short-term government influence, while targeting net zero in line with the Government's overarching strategy (SPS). However, there is a requirement for a body to assess the ESO's performance and hold it accountable. We agree this body should be Ofgem.

Question 16

Do you have views on the level of shareholding or control involving other 'energy interests' and the FSO at which a conflict of interest would become a concern?

Please provide your answer below

The Future System Operator should not have any level of private capital via shareholders. The aim is for the Future System Operator to remain free of any real or perceived conflicts of interest; having any private capital behind it, inevitably with other interests, undermines that.

Question 17

Are we considering the right implications of our proposals for Elexon and Xoserve?

Please provide your answer below

Yes. Whilst Elexon has been operationally and financially independent of NGESO despite being wholly owned by it, there is a need to consider the implications for Elexon of making changes to the ownership and regulatory arrangements for NGESO, though we don't believe any barriers to your proposals arise from this. We agree that it is important to ensure that Elexon retains its operational independence and remains appropriately accountable to the industry it serves.

We agree with the proposal to not make any changes to the industry ownership arrangement of Xoserve (owned jointly by National Grid gas transmission business and Britain's four major gas distribution network companies). We agree that it is appropriate to consider the impact of Government's decision on the appropriate roles of the Future System Operator concerning gas on Xoserve

Chapter 5

Questions in this section relate to

Implementation

- A preferred high-level approach for implementation of the FSO with the aim of seeking views on how the FSO can best implemented in practice

Question 18

What is your view on the preferred implementation approach?

Please explain why

The transition to an independent Future System Operator is critical and should not be underestimated. An early in-principle decision from government is needed to provide certainty to the ESO, National Grid, industry and more widely investors and then a clear transition plan is needed to confirm initial scope, expectations and resources as the Future System Operator is established. It will be important to secure early benefits from adopting the Future System Operator model recognising that full implementation is likely to take several years.

We agree that the ESO's existing capabilities should form the foundation of the Future System Operator, with additional capabilities added to deliver the new functions of the Future System Operator. This is vital to keep the NGEESO's highly specialised industry capabilities intact, and retain staff thereby reducing disruption and the risks associated with this.

When adding new roles to progressively build towards the full Future System Operator, we agree that prioritisation should be given to roles seen as "quick wins", and those most needed to allow the industry to adapt to the future system.

Question 19

Based on the areas where we are considering new and enhanced roles and functions for the FSO, which of these should be prioritised for development?

Please explain why

Obtaining the strategic holistic advice to enable Britain to meet net zero at pace is the top priority. Therefore, prioritising the enabling legislation to create the Future System Operator itself is key to facilitating this.

New and enhanced roles should be prioritised based on their likely impact and benefit. A focus on the power sector initially as it continues to decarbonise and grow will be natural, but longer-term planning for the gas system and hydrogen should also be prioritised.

It is important that BEIS and Ofgem continue to engage stakeholders at pace on implementation as the proposals are further developed.

Question 20

What do you believe are the risks to implementation?

Please provide your answer below

Delays to the enabling legislation and the designation of a strategic policy statement are risks to implementation. Without these frameworks in place, the Future System Operator cannot support the delivery of net zero.

Staff and resources at the Future System Operator will be crucial. A long drawn out process will create significant risks to the ESO current capability.

Related to this is funding. It will be important for the Future System Operator to build capability before taking on new functions and this needs to be funded in advance so a clear transition plan and funding will be needed. Similarly the ESO manages critical real time IT systems. Effective transition of this IT capability to the FSO is important.

How can these be mitigated?

Ensuring the legislation is given adequate priority to provide all parties with certainty.

As described above a transparent and detailed transition plan which mitigates the above risks,

Question 21

Do you have any comments on potential implications of implementation for you, your organisation, or other stakeholders?

Please provide your answer below

As set out above, the ESO is at the heart of the energy system. It is crucial that this reform and transition to Future System Operator is managed effectively to maintain broader investor confidence in the market. Delays, uncertainty and distractions to this central function could have very material consumer and broader sector implications with increased costs and emissions, alongside risks to our own investments.

Chapter 6

Questions in this section relate to

Impact assessment

- FSO Impact assessment which is presented alongside this consultation to assess the likely costs, benefits and distributional impacts of the policy options considered

Question 22

What is your view on the position there are likely to be cost savings across the energy system from an increased “whole system” view, as described in paragraphs 50-55 of the IA?

Please provide your answer below

We agree that there will probably be cost savings from a more coordination and whole system view particularly as the energy system decarbonises at scale and pace. We agree that the potential magnitude of savings is illustrated fairly.

Question 23

What is your view on the conclusion that policy intervention is likely to increase the benefits of onshore electricity network competition, as described in paragraphs 53-59 of the IA? If you agree, is the potential magnitude of savings illustrated fairly in the IA? If not, why not?

Please provide your answer below

We believe that the Future System Operator-assisted competitive appointment of onshore transmission owners could result in improved competition and therefore cost savings for the end consumer.

Question 24

Do you think that the impact assessment has identified and considered the key costs and benefits of policy intervention?

A ☒ Yes ☐ No

Question 25

Do you think that the distribution of impacts is fairly represented, with impacted groups correctly identified? Outlined in table 5 of the IA.

A ☒ Yes ☐ No

Question 26

We invite respondents' views on whether the proposals for energy system governance reform may have a different impact on people who have a protected characteristic (age, disability, gender re-assignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex (gender) or sexual orientation), in different ways from people who don't have that characteristic.

Please provide any evidence that may be useful to assist with our analysis of policy impacts.

We have nothing to add.

Do you have any other comments that might aid the consultation process as a whole?

No

Thank you for your views on this consultation.

Thank you for taking the time to let us have your views. We do not intend to acknowledge receipt of individual responses unless you tick the box below.

Please acknowledge this reply ☒

At BEIS we carry out our research on many different topics and consultations, and your views are valuable to us. Would you be happy for us to contact you again from time to time either for research or about other consultations?

☒ Yes

☐ No